



# Forest Insect & Disease Management

Evaluation  
Report

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## FLOODING DAMAGE ASSESSMENT OF FOREST STANDS ON THE CHEQUAMEGON WATERS FLOWAGE

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### INTRODUCTION

The Chequamegon Waters Flowage was subjected to severe spring flooding in 1975. The St. Paul Field Office was requested by the staff of the Chequamegon National Forest to evaluate the flooding damage.

### OBJECTIVE

To determine the location and extent of flooding damage to forested areas on the Chequamegon Waters Flowage.

### METHOD

The flowage was photographed during July 1975 using color infrared film with an RC-10 camera mounted in an Aerocommander. The image format was a 9 inch transparency type. All areas showing stress, indicated by foliage with a bluish cast on the film, were mapped and ground checked to determine the cause of the photo signature and obtain stand information.

### RESULTS AND DISCUSSION

Four areas were found with flooding stress (Fig. 1). The acreage of each area is shown in Figure 1. Each area was composed of a flood plain and a transitional zone. The flood plain areas were composed of old growth ash averaging 6-8 inches in DBH with an average of 20 trees/acre and a second story of 2-4 inch DBH trees with 40/stems/acre (yellow birch, white cedar, elm, white pine, tamarack, ash, red maple, and black spruce). The transitional zones were composed of 4-6 inch (DBH) trees (hemlock, basswood, paper birch, aspen, balsam fir and black ash) with an average of 100 stems/acre. The black ash and paper birch were showing severe flood stress and are expected to be reduced in vigor or die. The yellow birch, basswood, hemlock and white pine were showing moderate stress and are expected to recover if the flooding does not continue. The black spruce, white cedar, red maple, balsam fir, aspen, elm and tamarack were unaffected by the flooding. Continued flooding of these areas could result in mortality and loss of certain species from the area.



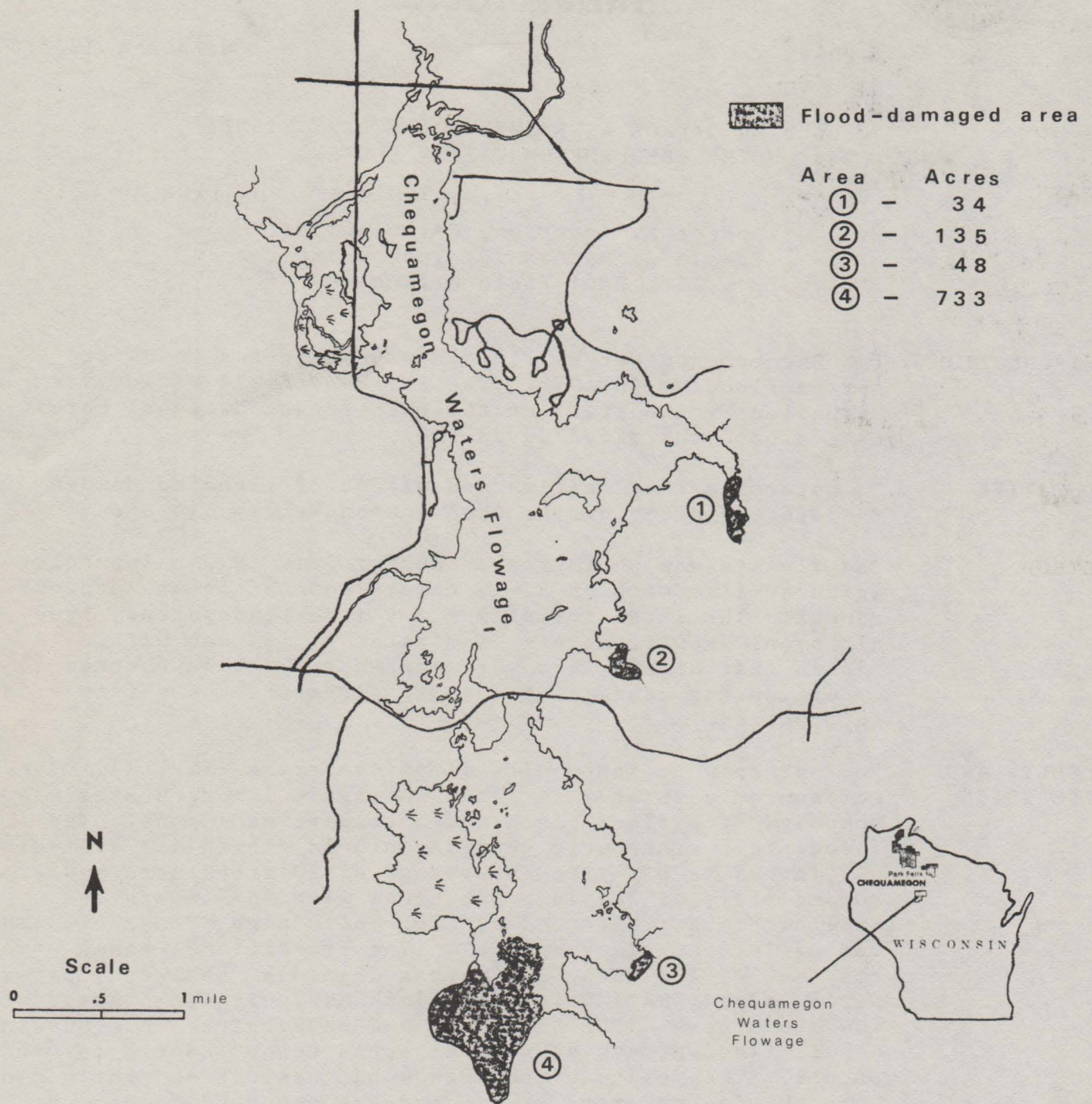


Figure 1. Flood - Damaged Areas on the Chequamegon Waters Flowage, Chequamegon National Forest, Wisconsin